

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1                   1.       (Currently amended): A thin-film magnetic head on a substrate having a  
2 slider surface comprising:  
3                   a first magneto-resistive effect element configured to detect a magnetic signal  
4 from a magnetic recording medium; and  
5                   a second magneto-resistive effect element disposed adjacent to the first magneto-  
6 resistive effect element and configured to measure an amount of lapping of the first magneto-  
7 resistive effect element along the slider surface,  
8                   the first magneto-resistive effect element comprising:  
9                   a first magneto-resistive effect film;  
10                  an upper shield film disposed above the first magneto-resistive effect film;  
11                  and  
12                  a lower shield film disposed below the first magneto-resistive effect film,  
13                  the second magneto-resistive effect element comprising a second magneto-  
14 resistive effect film disposed between a first electrode and a second electrode, wherein the first  
15 magneto-resistive effect film and the second magneto-resistive effect film have substantially  
16 similar shapes, wherein the second magneto-resistive effect element does not include shield films  
17 disposed on each surface of the second magneto-resistive film.

2-4.   (Canceled)

1                   5.       (Previously Presented): The thin-film magnetic head according to claim 1,  
2 wherein said substrate is formed of a non-magnetic material of Al<sub>2</sub>O<sub>3</sub>-TiC or SiC.

6-16.   (Canceled)

1                   17.     (Previously Presented): The thin-film magnetic head according to claim 1,  
2 further comprising an inductive element coupled to the first magneto-resistive effect element and  
3 configured to write information on a magnetic recording medium.

1                   18.     (Previously Presented): The thin-film magnetic head according to claim 1,  
2 wherein an end portion of the first magneto-resistive effect element constitutes a portion of the  
3 slider surface.

19-20. (Canceled)

1                   21.     (Currently amended): The thin-film magnetic head according to claim  
2 1~~claim 6~~, wherein a resistance characteristic of the second magneto-resistive effect element is  
3 configured to change as a portion of the second magneto-resistive effect element is removed  
4 during lapping.

22-24. (Canceled)

1                   25.     (New): A thin-film magnetic head on a substrate having a slider surface  
2 comprising:  
3                   a first magneto-resistive effect element configured to detect a magnetic signal  
4 from a magnetic recording medium; and  
5                   a second magneto-resistive effect element disposed adjacent to the first magneto-  
6 resistive effect element and configured to measure an amount of lapping of the first magneto-  
7 resistive effect element along the slider surface,  
8                   wherein the first magneto-resistive effect element comprises:  
9                   a first magneto-resistive effect film; an upper shield film disposed above  
10 the first magneto-resistive effect film; and  
11                   a lower shield film disposed below the first magneto-resistive effect film,

12                   the second magneto-resistive effect element consisting only of a second magneto-  
13 resistive effect film disposed between a first electrode and a second electrode, and having a  
14 shape substantially similar to that of the first magneto-resistive effect film.

1                   26.   (New): A thin-film magnetic head on a substrate having an air bearing  
2 surface including comprising:

3                   a first magneto-resistive effect element configured to detect a magnetic signal  
4 from a magnetic recording medium;

5                   a first connection terminal configured to detect the magnetic resistance of said  
6 first magneto-resistive effect element;

7                   a second magneto-resistive effect element adjacent to said first magneto-resistive  
8 effect element and configured to measure an amount of lapping of the first magneto-resistive  
9 effect element along the slider surface, and

10                  a second connection terminal configured to detect the resistance of said second  
11 magneto-resistive effect element,

12                  wherein the first magneto-resistive effect element comprises:

13                         a first magneto-resistive effect film;

14                         an upper shield film disposed above the first magneto-resistive effect film;

15                  and

16                         a lower shield film disposed below the first magneto-resistive effect film,

17                  the second magneto-resistive effect element consisting only of a second magneto-  
18 resistive effect film disposed between a first electrode and a second electrode and having a shape  
19 substantially similar to that of the first magneto-resistive effect film.

1                   27.   (New): A thin-film magnetic head comprising;

2                   a first magneto-resistive effect element configured to read a magnetic signal

3 recorded on a magnetic disk and having an end point that is configured to be exposed to an air  
4 bearing surface; and

5 a second magneto-resistive effect element adjacent to the first magneto-resistive  
6 effect element and configured to measure an amount of lapping of the first magneto-resistive  
7 effect element at the air bearing surface,

8 wherein the first magneto-resistive effect element comprises:

9 a first magneto-resistive effect film;

10 a first shield film disposed adjacent a first side of the first magneto-  
11 resistive effect film; and

12 a second shield film disposed adjacent a second side of the first magneto-  
13 resistive effect film opposite from the first side,

14 the second magneto-resistive effect element consisting only of a second magneto-  
15 resistive effect film disposed between a first electrode and a second electrode and having a shape  
16 substantially similar to that of the first magneto-resistive effect film.

1 28. (New): A thin-film magnetic head on a substrate having a slider surface  
2 comprising;

3 a first magneto-resistive effect element configured to detect a magnetic signal  
4 recorded from a magnetic recording medium, including a first magneto-resistive effect film, an  
5 upper shield film disposed above the first magneto-resistive effect film, and a lower shield film  
6 disposed below the first magneto-resistive effect film, wherein the first magneto-resistive effect  
7 film, the upper shield film, and the lower shield film are stacked on said substrate; and

8 a second magneto-resistive effect element disposed adjacent to the first magneto-  
9 resistive effect element along the slider surface,

10 the second magneto-resistive effect element consisting only of a second magneto-  
11 resistive effect film disposed between a first electrode and a second electrode,

12 the second magneto-resistive effect element having a shape substantially similar  
13 to that of the first magneto-resistive effect film.